

SPECIFICATIONS

Commercial	2024 - Obsolete
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Applications:

High strength fabricated or machined items in aircraft industries, general engineering, machinery, military equipment, truck wheels. Screw machine products. Structural applications. Rivets.

Characteristic Properties:

Heat treatable alloy. Very good machining characteristics. High strength alloy with a strength slightly higher than 2014(A) and 2017A and 2030. High fatigue strength. Suitable for welding only by resistance welding. Corrosion resistance only with cladding or other protection.

CHEMICAL COMPOSITION

BS 2L97(1971)
Alloy L97

Element	% Present
Copper (Cu)	3.8 - 4.9
Magnesium (Mg)	1.2 - 1.8
Manganese (Mn)	0.3 - 0.9
Iron (Fe)	0.5 max
Silicon (Si)	0.5 max
Titanium + Zirconium (Ti+Zr)	0.2 max
Zinc (Zn)	0.2 max
Chromium (Cr)	0.1 max
Nickel (Ni)	0.05 max
Lead (Pb)	0.05 max
Tin (Sn)	0.05 max
Aluminium (Al)	Balance

ALLOY DESIGNATIONS

Aluminium alloy L97 - 2024 is covered by standard BS 2L97 (1971)

TEMPER TYPES

The most common temper for L97 - 2024 aluminium plate is:

- T351 - Solution heat treated then stress relieved by stretching. Equivalent to T4 condition.

SUPPLIED FORMS

L97 - 2024 aluminium is supplied in the following forms:

- Plate

GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2790 g/cm ³
Melting Point	640 °C
Thermal Expansion	23.10 x10 ⁻⁶ /K
Modulus of Elasticity	73000 GPa
Thermal Conductivity	121 W/m.K

MECHANICAL PROPERTIES

Thickness (mm)	Proof Strength (Min)	Tensile Strength (Min)	Elongation % (Min)
Over 6 up to & incl. 12.5	280	430	10
Over 12.5 up to & incl. 25	280	430	10
Over 25 up to & incl. 40	280	420	9
Over 40 up to & incl. 63	270	410	9
Over 63 up to & incl. 90	270	410	8
Over 90 up to & incl. 115	270	400	8
Over 115 up to & incl. 140	260	390	7

CONTACT

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REVISION HISTORY

Datasheet Updated 09 January 2014

DISCLAIMER

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

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